Defense Information Infrastructure (DII)

Common Operating Environment (COE)

Version 3.0.0.3

Kernel Installation Guide (AIX 4.1.4)

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Preface

[HELVETICA FONT]	Used to indicate keys to be pressed. For example, press [RETURN].
Courier Font	Used to indicate entries to be typed at the keyboard, UNIX commands, titles of windows and dialog boxes, and screen text. For example, type the following command: `tar xvf /dev/rmt0`
"Quotation Marks"	Used to indicate prompts and messages that appear on the screen.
Italics	Used for emphasis.

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1.   Introduction

1.1   Overview

This document provides information and guidance needed for proper installation of the
AIX Version 4.1.4 Operating System and the Defense Information Infrastructure (DII) Common
Operating Environment (COE) Kernel Version 3.0.0.3.

The DII COE contains a large number of functional blocks called segments; however, not all
segments are required for every application. The DII COE *Kernel* is the minimal set of software
required on every workstation regardless of how the workstation will be used. The DII COE
Kernel includes the following features:

- C   Operating system

- C   Windowing environment

- C   System Administration function

- C   Security Administration function

- C   Runtime tools

- C   Commercial Off-the-Shelf (COTS) software [including the desktop graphical user
  interface (GUI) and windowing environment]

- C   Government Off-the-Shelf (GOTS) software.

The System Administration segment is required because it contains the software needed to load all
other segments. The GUI is required because it is the interface through which an operator issues
commands to the system. The GUI is an icon-driven and menu-driven desktop interface, not a
command line interface. The templates included in the DII COE Kernel describe the basic runtime
environment context that an operator inherits upon login (e.g., which processes are run in the
background or which environment variables are defined). The DII COE Kernel ensures that every
workstation in the system operates in a consistent manner and that every workstation begins with
the same environment.

From an installation sequence perspective, it is necessary to define a subset of the DII COE
Kernel called the bootstrap DII COE. Segments are installed through a special DII COE program
called the segment installation tool, which is accessed as a system administration function.
However, the segment installation tool itself must be installed before it can be used to install
segments. Moreover, COTS software is typically not in segment format. How then is the segment
installation tool, as well as at least a minimum operating system, installed to permit the DII COE
Kernel to be loaded? This is done by first loading the operating system and windowing
environment, then by loading the DII COE segment installation software. Once the DII COE is

thus "bootstrapped," it is possible to load the remaining components of the DII COE Kernel and any additional segments.

Figure 1 shows a more detailed notional depiction of the process. The user is responsible for installing the operating system and windowing environment, the DII COE, which contains operating system modifications to support DII, the desktop GUI, the COE, System Administration, and Security Administration. Reference the DII COE Integration and Runtime Specification for more information about the DII COE.
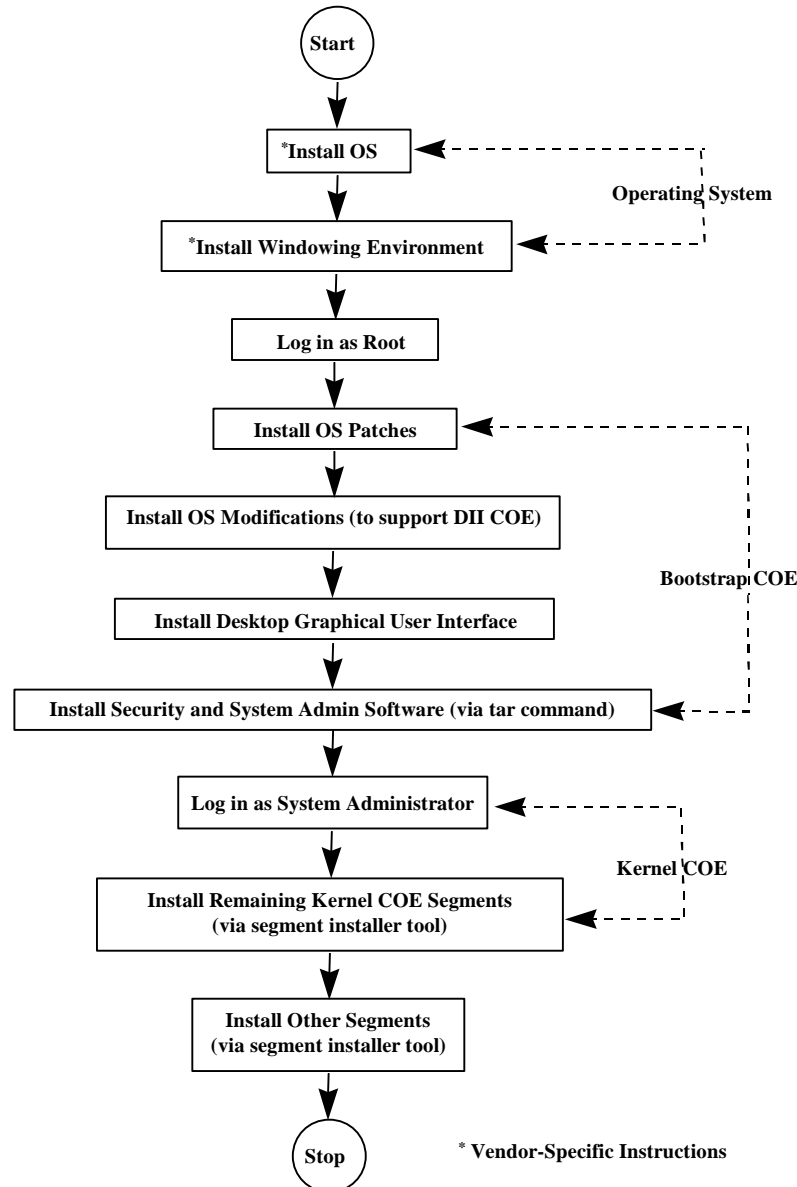

Figure 1. Notional DII COE Kernel Installation

This installation approach has several advantages: (1) It greatly simplifies the installation process; (2) it guarantees a standard starting configuration for all platforms regardless of how they will be used; and (3) it allows all remaining segments to be loaded in a standard way regardless of the hardware platform or mission application, thus simplifying system administration. Through the COE, segments may extend the base environment as required as they are loaded.

1.2   Installation Process

During the AIX Version 4.1.4 installation process, an installation kernel is booted from the AIX CD-ROM. Your system disk is initialized, and the new system is configured using configurations supplied on the installation media. Once the configuration and initialization are complete, a new fully functional AIX operating system and applications are loaded from the AIX CD-ROM onto your system disk.

The DII COE Kernel tape is then installed. The DII COE Kernel provides the desktop GUI, the operating system patches, and the DII COE Security and System Administration software. Reference the *DII COE System Administrator's Guide (HP-UX 10.20 and Solaris 2.5.1)* and the *DII COE Security Manager's Guide (HP-UX 10.20 and Solaris 2.5.1)* for more information about System and Security Administration functionality.

1.3   Referenced Documents

Reference the following documents for more information about the DII COE:

- C *Defense Information Infrastructure (DII) Common Operating Environment (COE) Integration and Runtime Specification Version 2.0*, DII COE I&RTS:Rev 2.0, Inter-National Research Institute, October 23, 1995

- C *Defense Information Infrastructure (DII) Common Operating Environment (COE) System Administrator's Guide (HP and Solaris) FINAL Version 3.0.0.3*, DII.3003.Final.UNIX.AG-1, Inter-National Research Institute, October 29, 1996

- C *Defense Information Infrastructure (DII) Common Operating Environment (COE) Version 3.1 Security Manager's Guide (HP-UX 10.20 and Solaris 2.5.1)*, DII.31.HPSOL.SMG-1, Inter-National Research Institute, April 14, 1997

- C *Defense Information Infrastructure (DII) Common Operating Environment (COE) Version 3.0.0.3 Programming Guide*, DII.3003.AIX414.PG-1, Inter-National Research Institute, October 20, 1997.

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2. System Environment

2.1   System Requirements

This section describes DII COE hardware components, AIX Operating System components, and DII COE Kernel components for the AIX Operating System.

2.1.1   Hardware Components

The following hardware components are required.

C **IBM Computer**. IBM Power PC 2.

C **Memory**. At least 64 megabytes (MB) of random access memory (RAM).

C **Hard disk drive**. Recommend 1.2 gigabyte (GB) or larger capacity.

C **Source devices**. A CD-ROM drive to load the operating system; an 8mm tape drive to load the DII COE software.

NOTE: You should use an IBM tape drive to load the DII COE software. If you use a different kind of tape drive, you may experience problems.

The following hardware components are optional:

C   Floppy disk drive

C   Cartridge tape drive

C   Audio card.

2.1.2   Operating System Component

The following AIX Operating System component is required:

C   AIX CD-ROM labeled *AIX 4.1.4 for Server for G5 Processors*, which contains AIX Version 4.1.4. (5765-393).

2.1.3 Kernel Components

The DII COE Kernel (AIX Version 4.1.4) tape is required. The DII COE Kernel is a suite of applications layered on top of the AIX Operating System. The DII COE Kernel tape contains software relating to the following areas:

C   Operating system modifications

C   Administration software required for installation and for System and Security Administration

C   X Windows software

C   Motif software

C   Common Desktop Environment (CDE) software.

2.2   AIX Operating System and DII COE Kernel Installation Preparation

The following questions must be answered before you install the AIX Operating System and the DII COE Kernel. Your system administrator should provide you with the appropriate answers.

2.2.1   AIX Version 4.1.4 Operating System Installation Preparation

Answer the following questions before installing AIX Version 4.1.4.

1. If your system has more than one hard disk, will you be configuring hdisk0 as your system `root` disk? If not, which disk will you be configuring as your system `root` disk?

2. What is the password for the `root` administrative account? This password is required to log in to the system and is specified in Section 3.3, *Configuring and Installing the AIX Operating System.*

3. What network interface should you use?

4. What is the host name of the system?

NOTE:

1. The name of the system can be found by typing the following command at a prompt:

    ```
    /usr/bin/hostname  [RETURN]
    ```

    The name of the system is displayed.

2. The name of the system can be found if you know the Internet Protocol (IP) address of the system. Type the following command at a command line prompt. This command only works if the Domain Name Service (DNS) has been configured.

    ```
    /usr/bin/nslookup [IP address] [RETURN]
    ```

    For example, if the IP address of the system is "123.456.789.123", type the following command:

    ```
    /usr/bin/nslookup 123.456.789.123 [RETURN]
    ```

    Information similar to the following appears:

    ```
    Server:  myserver
    Address: 123.123.123.123

    Name:    mysystem
    Address: 123.456.789.123
    ```

    where `myserver` is the name server, `123.123.123.123` is the IP address of the name server, and `mysystem` is the name of the system.

---

5. What is the IP address of the system?

NOTE:

1. If you know the name of the system (e.g., `mysystem`) but do not know the IP address of the system, type the following command at a command line prompt:

   ```
   /usr/bin/cat /etc/hosts [RETURN]
   ```

   After you type this command, information similar to the following appears:

   ```
   127.0.0.1          localhost
   123.456.789.123    mysystem
   ```

   The line that contains the name of the system being configured also includes the system's IP address.

2. If you know the name of the system but do not know the IP address of the system, type the following command at a command line prompt. This command only works if DNS has been configured.

   ```
   /usr/bin/nslookup [host name] [RETURN]
   ```

   For example, if the name of the system is "mysystem", type the following command:

   ```
   /usr/bin/nslookup mysystem [RETURN]
   ```

   Information similar to the following appears:

   ```
   Server:  myserver
   Address: 123.123.123.123

   Name:    mysystem
   Address: 123.456.789.123
   ```

   where `myserver` is the name server, `123.123.123.123` is the IP address of the name server, and `123.456.789.123` is the IP address of the system.

---

6. What is the system's network mask?

7. What is the default gateway address?

2.2.2   DII COE Kernel Installation Preparation

Answer the following questions before installing the DII COE Kernel tape.

1. What is the tape device number?

2. Does your network have a default router? If so, what is the IP address of the default router?

3. What is the password for the System Administration (`sysadmin`) account?

4. What is the password for the Security Administration (`secman`) account?

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3.   AIX Operating System Installation

3.1   Booting From the AIX CD

The AIX Operating System must be loaded from CD-ROM. The following steps detail the full installation of the operating system.

NOTE: The prompts, menus, and menu items displayed below are representative and may not reflect the actual prompts and menu items verbatim.

NOTE: This automated installation procedure is called a *destructive installation* because installation removes any previously installed software. Your disk *will* be overwritten as part of the installation process and all data *will* be lost.

Follow the steps below to boot from the AIX CD.

STEP 1:   **Attach a CD-ROM drive to the system, if necessary**. Attach a CD-ROM drive to the system if one is not already attached.

STEP 2:   **Place the AIX CD in the CD-ROM drive**. Place the CD labeled *AIX 4.1.4 for Server for G5 Processors* in the CD-ROM drive.

STEP 3:   **Power up the system**. Power up the system, if necessary.

STEP 4:   **Put the system in service mode**. Turn the system key to the wrench symbol to put the system in service mode. Putting the system in service mode allows you to boot from a device other than the primary boot disk (in our case, the CD-ROM drive).

STEP 5:   **Reboot the system**. Type the following command to reboot the system:

```
shutdown -Fr [RETURN]
```

NOTE: A system reboot can take 10-15 minutes.

STEP 6:   **Proceed to the next section**. Proceed to the next section to install the base operating system.

3.2   Installing the Base AIX Operating System

STEP 1:   **Choose to continue with the installation**. Press F1 and then press [RETURN] when the following message appears (the message appears first in English and then in various other languages):

```
Type the F1 key and press Enter to use this display as
the system console.
```

STEP 2:   **Choose to view the installation in English**. Type 1 and press [RETURN] when the following message appears (the message appears first in English and then in various other languages):

```
1  Type 1 and press Enter to have English during install.
```

STEP 3:   **Choose to change default installation settings**. The AIX "Welcome" screen appears (Figure 2). Type 2 and press [RETURN] to choose to change default installation settings.

```
              Welcome to Base Operating System
                   Installation and Maintenance

Type the number of your choice and press Enter. Choice is indicated
by >>>.

>>> 1 Start Install Now with Default Settings

    2 Change/Show Installation Settings and Install

    3 Start Maintenance Mode for System Recovery
```

Figure 2. AIX Welcome Screen

STEP 4:   **Choose to change system settings**. Type 1 and press [RETURN] to change system settings when the Installation and Settings screen appears (Figure 3).

```
                    Installation and Settings

Either type 0 and press Enter to install with current settings, or
type the number of the setting you want to change and press Enter.

     1   System Settings:
            Method of Installation..............Preservation
            Disk Where You Want to Install.......hdisk0

     2   Primary Language Environment Settings (AFTER Install)
            Cultural Convention..................English (United
States)
            Language.............................English (United
States)
            Keyboard....................... .....English (United
States)
            Keyboard Type........................Default

     3   Install Trusted Computing Base.........No

>>>  0   Install AIX with the current settings listed above.

_____
                            | WARNING: Base Operating System Installation
will
                            | destroy or impair recovery of SOME data on the
                            | destination disk hdisk0.

>>> Choice [0]:
```

Figure 3. Installation and Settings Screen

STEP 5:   **Choose to perform a destructive installation**. The Change Method of Installation screen appears (Figure 4). Type 1 and press [RETURN] to choose to perform a destructive installation.

```
                    Change Method of Installation

Type the number of the installation method and press Enter.

   1 New and Complete Overwrite
     Overwrites EVERYTHING on the disk selected for installation.
     Warning: Only use this method if the disk is totally empty or if
     there is nothing on the disk you want to preserve.

   2 Preservation Install
     Preserves SOME of the existing data on the disk selected for
     installation. Warning: This method overwrites the usr (/usr),
     variable (/var), temporary (/tmp), and root (/) file systems.
     Other product applications, files, and configuration data will
     be destroyed.

>>>  Choice [2]:
```

Figure 4. Change Method of Installation Screen

STEP 6:   **Select the default disk to be used for the operating system installation**. The
`Change Disk(s) Where You Want to Install` screen appears (Figure 5). Type
the number that corresponds to the disk to be used for the operating system
installation. In our example below, you would type `0` and press [RETURN] to select
the hdisk0 default disk as the disk to be used for the operating system installation,
type `2` and press [RETURN] to select hdisk1, or type `3` and press [RETURN] to
select hdisk2.

NOTE: The disk you select should be the same disk you selected in Section 2.2.1, *AIX Version 4.1.4 Operating System Installation Preparation.*

```
        Change Disk(s) Where You Want to Install

Type one or more numbers for the disk(s) to be used for installation
and press Enter. To cancel a choice, type the corresponding number
and press Enter. At least one bootable disk must be selected. The
current choice is indicated by >>>.

        Name      Location Code    Size (MB)    VG Status    Bootable

>>> 1  hdisk0   00-00-0S-010     2150         rootvg       Yes
    2  hdisk1   00-00-0S-020     2047         rootvg       Yes
    3  hdisk2   00-00-0S-030     1010         other vg     Yes

>>> 0  Continue with choices indicated above.

>>> Choice [0]:
```

Figure 5. Change Disk(s) Where You Want to Install Screen

STEP 7:   **Accept the installation settings**. The `Installation and Settings` screen
reappears (Figure 3). The `Method of Installation` field now states `New and
Complete Overwrite` instead of `Preservation`. Type `0` and press [RETURN] to
accept the settings.

STEP 8:   **Review installation messages and turn the system key to the `OK` position**. The
`Installing Base Operating System` screen appears intermittently to display
installation messages and to show the progress of the installation--the percentage
of tasks complete and the elapsed installation time (in minutes). Figure 6 shows the
first installation message that appears in the `Installing Base Operating
System` screen. Turn the system key to the `OK` position to prepare to configure the
operating system.

```
                    Installing Base Operating System

Turn the system key to the NORMAL position any time before the
installation ends.

   Please wait...


    Approximate             Elapsed time
  % tasks complete          (in minutes)

    [percentage]        [number of minutes]
```

Figure 6. Installing Base Operating System Screen

WARNING: Turn the system key to the OK position *immediately*. The key must be in this position by the time the base operating system has completed installation.

NOTE: Base operating system installation takes between 10-20 minutes.

The following message appears near the end of the installation:

```
installp: * * * A T T E N T I O N ! ! !
Software changes processed during this session require this
system and any of its diskless/dataless clients to be rebooted
in order for the changes to be made effective.
```

The machine then reboots.

STEP 9: **Proceed to the next section**. Proceed to the next section to configure and install AIX.

3.3   Configuring and Installing the AIX Operating System

STEP 1: **Review the configuration options in the `Help Viewer` window**. After the base operating system has been installed, the `Help Viewer` window appears. This window includes the following panel:

```
Installation Assistant Task List
This version of Installation Assistant displays after a BOS new
or complete overwrite installation. Complete these tasks to
finish setting up your system. To learn how to best use
Installation Assistant, click on the underlined text
(hyperlink): Using Installation Assistant
```

This text is followed by a list of operating system configuration options.

NOTE: Click on the airplane icon beside each option to go directly to the task application.

STEP 2: **Set the system date and the time, if necessary**. Click on the `Set Date and Time` icon in the `Installation Assistant Task List` panel of the `Help Viewer` window. The `Set Date and Time` window appears.

The current system time appears at the top of the window. If you do not need to make any changes, click on the `Cancel` button to exit the window and proceed to STEP 4.

NOTE: If you do not need to make any changes, do *not* click on the `Set Date/Time` button. The current system time appears at the top of the window. The current system time updates each second. The time that appears in the `Time` panel is static--it does not update. If you do not need to make any changes and you click on the `Set Date/Time` button, the system will accept the static time that appears in the `Time` panel, which may be incorrect by seconds or even minutes, depending on how long you take to review the information in the window.

In the `Date` panel, you can type a new year in the `Year` field or use the scroll bar to change the year; click on the "month" toggle to select another month from the scroll list; and click on the appropriate day of the week in the calendar. In the `Time` panel, you can type the appropriate time in the `Hours`, `Minutes`, and `Seconds` fields or use the scroll bars to select the appropriate time.

To change the time zone, click on the `List` button in the `Time` panel. The `Time Zone` window appears. The `Daylight Savings Time` toggle is turned on by default. Click on the toggle to turn off daylight savings time, if necessary. Use the scroll bar to view the time zones from which you can choose, click on the appropriate time zone to select it, and click on the `OK` button.

Since the time fields are static, make sure you reset the time just before you are ready to exit the window. When you are done making changes to the date, time, and time zone fields, as necessary, click on the `Set Date/Time` button.

STEP 3: **Acknowledge the date and time message**. Click on the `OK` button when the `Exit` dialog box appears with the following message:

```
The system date and time have successfully
been changed. If the time zone has been modified,
it will take effect on the next system boot.
```

STEP 4: **Specify the `root` password for the system**. The `Help Viewer` window returns to the forefront. Click on the `Set root Password` icon in the `Installation Assistant Task List` panel of the `Help Viewer` window. An AIX terminal emulator window appears with the following prompt:

```
Changing password for "root"
root's New password:
```

NOTE: Passwords should contain a combination of uppercase and lowercase letters and no more than eight characters. See your system administrator before choosing your `root` password.

Type the `root` password and press [RETURN]. The following prompt appears:

```
Re-enter root's new password:
```

Type the `root` password again and press [RETURN].

STEP 5: **Choose to configure network communications**. The `Help Viewer` window returns to the forefront. Click on the `Configure Network Communications` icon in the `Installation Assistant Task List` panel of the `Help Viewer` window to configure the system to communicate with other systems in the network and to access their resources. The `System Management Interface Tool` window appears. This window includes a `Configure Network Communications` panel.

STEP 6: **Configure Transmission Control Protocol/Internet Protocol (TCP/IP)**. Click on the `TCP/IP Startup` option in the `Configure Network Communications` panel. TCP/IP is a data communications protocol for handling machine-to-machine data transfers across a network.

STEP 7: **Select the appropriate network interface**. The `Single Select List` window appears. The list of network interfaces that appears in the window depends on your system's interface cards. Click on the appropriate network interface to select it.

NOTE: See your system administrator before choosing your network interface.

STEP 8: **Review the information in the `Minimum Configuration & Startup` window**.
The `Minimum Configuration & Startup` window appears (Figure 7).

```
            Minimum Configuration & Startup

*HOSTNAME                          [ mysystem          ]

*Internet ADDRESS (dotted decimal) [ 123.456.789.123   ]

 Network MASK (dotted decimal)     [ 255.255.255.0     ]

*Network INTERFACE                 [ en0               ]

NAMESERVER                         [                   ]

    Internet ADDRESS (dotted decimal) [                ]

    DOMAIN Name                    [                   ]

Default GATEWAY Address            [                   ]

(dotted decimal or symbolic name)

 Your CABLE Type                   [ N/A               ]

 START Now                         [ no                ]
```

Figure 7. Minimum Configuration & Startup Window

STEP 9: **Specify a host name for the system**. The host name identifies the system on the
network. Click on the `*HOSTNAME` field, highlight the text in the field, and enter the
appropriate host name (e.g., `mysystem`).

NOTE: The host name must be unique within the domain in which it resides. Creating a
duplicate host will cause network problems after you install AIX. A host name should contain
no more than eight characters and can contain letters, numbers, underscores (_), or hyphens
(-). A host name must start with a letter. Uppercase letters are not recommended. See your
system administrator before choosing your host name.

STEP 10: **Assign the system a unique IP address**. Click on the `*Internet ADDRESS` field and enter the appropriate IP address.

NOTE: An IP address must be unique and follow your site's address conventions or a system or network failure may result. IP addresses contain four sets of numbers between 0 and 255 that are separated by periods (e.g., `123.456.789.123`). See your system administrator before choosing your IP address.

STEP 11: **Specify the system's network mask**. Click on the `Network MASK` field and enter the network mask (e.g., `255.255.255.0`).

NOTE: See your system administrator before choosing your network mask.

STEP 12: **Make sure the selected network interface is correct**. The network interface you selected in STEP 7 should appear in the `*Network INTERFACE` field.

STEP 13: **Accept the configuration changes**. Click on the `OK` button at the bottom of the `Minimum Configuration & Startup` window to accept the configuration changes.

NOTE: Do not fill in the rest of the fields in the `Minimum Configuration & Startup` window.

STEP 14: **Review the configuration changes and accept them a second time**. The `Minimum Configuration & Startup` window now has a `Command` panel, which shows the information you input, and an `Output` panel, which shows the selections you made. Click on the `Done` button to accept the changes.

STEP 15: **Exit from the `Minimum Configuration and Startup` window**. The `Minimum Configuration & Startup` window appears as shown in Figure 7. Click on the `Cancel` button to exit the window.

STEP 16: **Choose to install NFS**. The `System Management Interface Tool` window returns to the forefront. Click on the `Start NFS` option in the `Configure Network Communications` panel to choose to install NFS.

STEP 17: **Select the appropriate NFS option**. The `Single Select List` window appears. Click on the following option to select it:

> `Click on this item to automatically install NFS.`

STEP 18: **Choose to start NFS now and upon system reboot**. The `Start NFS` window appears. The text in the field states `START NFS now, on system restart or both`. Click on the `OK` button to choose to start NFS now and upon system reboot.

STEP 19: **Review and accept the changes**. The `Start NFS` window now has a `Command` panel, which shows the information you input, and an `Output` panel, which shows the selections you made. Click on the `Done` button to accept the changes.

STEP 20: **Exit from the `Start NFS` window**. The `Start NFS` window reappears as shown in STEP 18. Click on the `Cancel` button.

STEP 21: **Exit from the `System Management Interface Tool` window**. The `System Management Interface Tool` window reappears. Click on the `Cancel` button to exit the window.

STEP 22: **Choose to install software applications**. The `Help Viewer` window returns to the forefront. Click on the `Install Software Applications` icon in the `Installation Assistant Task List` panel of the `Help Viewer` window to choose to install software applications.

STEP 23: **Choose to install a bundle of software**. The `System Management Interface Tool` window appears. Click on the `Install a Bundle of Software (Easy Install)` option in the `Install Software Applications` panel. The products on the media are grouped into bundles designed for specific types of users. The `Install a Bundle of Software (Easy Install)` option enables you to install software based on your environment.

STEP 24: **Select the appropriate software source and software bundle**. The `Easy Install` window appears with the following prompt:

```
Which software source would you like to use? Choose one:
```

Click on the `CD-ROM` icon to select it as the installation source. Use your mouse to enlarge the window so you can see all the bundles of software in the bottom part of the screen after clicking on the `CD-ROM` icon.

The window also contains the following prompt:

```
Which bundle of software would you like to install? Choose one:
```

Click on the `Server` icon to select it as the software bundle you plan to install.

The following message appears at the bottom of the window:

```
Server bundle -  a collection of software products for systems
running in a multi-user, stand-alone, or networked
environment.
```

Click on the `Install/Update` button to install the server software bundle.

STEP 25: **Choose to continue with the installation**. Click on the `Yes` button when the following prompt appears:

```
                    Are You Sure?

      Continuing may delete information you want to keep.
      This is your last chance to stop before installation
      or update.
      Do you wish to continue?
```

The `Work-in-progress` window appears with a series of messages. A clock appears in the window to indicate that the installation is progressing.

NOTE: Installation takes about 20 minutes.

STEP 26: **Determine if you want to review the installation log file**. The `Installation complete` dialog box appears with the following message:

```
      Installation completed. Look at the 'log' file
      for Successes, Failures or Warnings, if any.
```

Click on the `View Log` button to view the installation log, or click on the `OK` button to exit the window. If you click on the `View Log` button, proceed to STEP 27; if you click on the `OK` button, proceed to STEP 28.

STEP 27: **View the installation log file**. The `Message Log` window appears. Use the scroll bar to review all the installation messages. Click on the `OK` button when you are finished.

STEP 28: **Exit from the `Installation Complete` dialog box**. The `Installation Complete` dialog box reappears. Click on the `OK` button to exit the window.

STEP 29: **Exit from the `Easy Install` window**. The `Easy Install` window reappears. Click on the `Exit` button to exit the window.

STEP 30: **Acknowledge the warning about leaving the Easy Install application**. Click on the `Yes` button when the following message appears:

```
                Warning
This action causes you to exit the
Easy Install application.

Are you sure you want to do this?
```

STEP 31: **Exit from the `Help Viewer` window**. The `Help Viewer` window returns to the forefront. Click on the `Tasks Completed - Exit to AIX Login` icon in the `Installation Assistant Task List` panel of the `Help Viewer` window to exit the window.

STEP 32: **Remove the CD from the CD-ROM drive**. Remove the *AIX 4.1.4 for Server for G5 Processors* CD from the CD-ROM drive.

STEP 33: **Proceed to the next section**. Proceed to the next section to install the DII COE Kernel.

4. DII COE Kernel Installation

The DII COE Kernel tape provides the desktop GUI and the Security and System Administration software. Follow the steps below to install the DII COE Kernel.

NOTE: The AIX Operating System *must* be loaded before the DII COE Kernel can be loaded.

NOTE: All steps must be performed in the exact order presented to correctly install the DII COE Kernel. No steps may be skipped.

NOTE: This procedure takes approximately 30 minutes depending on the speed of your system.

STEP 1: **Attach a tape drive to the system, if necessary**. Attach a tape drive to the system if one is not already attached.

STEP 2: **Load the kernel tape**. Load the DII COE Kernel tape into a tape drive.

STEP 3: **Log in to the system**. Type `root` and press [RETURN] at the `Console login:` prompt. Type your `root` password and press [RETURN] at the `root's Password:` prompt.

STEP 4: **Change the directory to `root`**. Type the following command to change the directory to `root`:

```
cd / [RETURN]
```

STEP 5: **Extract the installation program from the tape**. Type the following command to extract the installation program from the tape:

```
tar xvf /dev/rmtY [RETURN]
```

where `Y` is the tape device number from Section 2.2.2, *DII COE Kernel Installation Preparation*.

The following message should appear:

```
x tmp
x tmp/ChangeUID.ksh, 1727 bytes, 4 media blocks
x tmp/inst.dii, 6223 bytes, 13 tape blocks
```

STEP 6: **Start the installation program.** Type the following command to start the installation program:

```
/tmp/inst.dii [RETURN]
```

STEP 7: **Enter the device number of the tape drive**. Type the device number of the tape drive and press [RETURN] when the following prompt appears:

```
Enter the device number of the tape drive (e.g. 0):
```

The following message appears:

```
Positioning tape for DII...
```

Installation of the DII COE Kernel begins.

NOTE: This procedure takes approximately 30 minutes depending on the speed of your system.

The following message appears on the screen at the end of the installation:

```
--Default Router--
```

```
In order to specify a default network router, you need to
provide the router network (IP) address.
```

STEP 8: **Determine if your network has a default router.** The following prompt appears:

```
Does this network have a default router?
```

Type Y or N and press [RETURN]. If you type Y, proceed to STEP 9; if you type N, proceed to STEP 11.

STEP 9: **Enter the IP address of your default router.** The following prompt appears:

```
Enter the IP address of your Default Router, then press [Return].
```

Enter the IP address of your default router and press [RETURN].

STEP 10: **Confirm that the default router IP address is correct.** The following prompt appears:

```
You have chosen [IP address] as the default router for this
system.
```

```
Is this correct?
```

Type Y and press [RETURN] if the information is correct, or type N and press [RETURN] to return to the prompt described in STEP 9.

STEP 11: **Enter and confirm a password for `sysadmin`.** The following messages appear:

```
Enter password for sysadmin:
Changing password for "sysadmin"
sysadmin's New password:
```

Type your `sysadmin` password and press [RETURN]. Retype the password and press [RETURN] at the following prompt:

```
Re-enter sysadmin's new password:
```

NOTE: See your system administrator before choosing your `sysadmin` password.

STEP 12: **Enter and confirm a password for `secman`.** The following messages appear:

```
Enter password for secman:
Changing password for "secman"
secman's New password:
```

Type your `secman` password and press [RETURN]. Retype the password and press [RETURN] at the following prompt:

```
Re-enter secman's new password:
```

NOTE: See your system administrator before choosing your `secman` password.

The system reboots and the installation is completed.

NOTE: A system reboot can take 10-15 minutes.

STEP 13: **Proceed to the next section**. Proceed to the next section if you want to log in to the system.

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5. DII COE Login Accounts

After you install the AIX Operating System and the DII COE Kernel, predefined login accounts are available to allow you to perform functions that are described in detail in the *DII COE System Administrator's Guide (HP-UX 10.20 and Solaris 2.5.1)*.

To use the DII COE, you must enter a login name and password. Enter any of the valid login commands described in the following sections.

5.1 The root Login

The `root` login is the standard UNIX `root` login. Follow the steps below to log in as `root` from the DII COE login screen:

STEP 1: **Log in as `root`**. Type `root` in the `Name` field and press [RETURN].

STEP 2: **Enter the `root` password**. Type the `root` account password in the `Password` field and press [RETURN]. The CDE Front Panel appears at the bottom of the screen.

5.2 The System Administration Login

The sysadmin login displays a menu bar of System Administration and maintenance utilities. These utilities allow the system administrator to perform various System Administration functions, such as selecting and configuring printers, managing print jobs, and closing windows; rebooting the system, mounting file systems, formatting hard drives, and initializing floppy diskettes; loading or installing segments; changing the machine ID, editing host information, setting the system time, configuring a workstation to use DNS host name and IP address resolution, setting routing configuration, and configuring NIS; and removing global data.

Reference the *DII COE System Administrator's Guide (HP-UX 10.20 and Solaris 2.5.1)* for more information about the System Administration application software.

Follow the steps below to log in to the System Administration utility from the DII COE login screen:

STEP 1: **Log in as system administrator**. Type `sysadmin` in the `Name` field and press [RETURN].

STEP 2: **Enter the `sysadmin` password**. Type the `sysadmin` password in the `Password` field and press [RETURN]. The System Administration software appears.

5.3   The Security Administration Login

Follow the steps below to log in to the Security Administration utility from the DII COE login screen:

STEP 1:   **Log in as security administrator**. Type `secman` in the `Name` field and press [RETURN].

STEP 2:   **Enter the `secman` password**. Type the `secman` password in the `Password` field and press [RETURN]. The Security Administration software is now enabled.